Time : Three hours   Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is biogenesis?

2. Who is called the father of antiseptic surgery?

3. Define the term microbial diversity.

4. Define virus.

5. What is soil microbiology?

6. Define genetic engineering.

7. Define axenic culture

8. Expand ATCC.

9. Name the objective lenses in a microscope.

10. Define mordant.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write an account on Germ theory of diseases.

Or

(b) Summarise the contribution of Louis Pasteur in vaccine production.

12. (a) Write short notes on the distribution of microbes in nature.

Or

(b) Differentiate between prokaryotes and Eukaryotes.

13. (a) Describe the different branches of Microbiology.

Or

(b) Genetic engineering is one of the thrust areas of Microbiology - Discuss.

14. (a) Write down the isolation procedure of bacteria by pour plate method.

Or

(b) Give an account on culture collection centers.

15. (a) Describe the parts of a light microscope with a neat diagram.

Or

(b) Explain in brief about the principle and procedure of Gram's staining.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss valuable contribution of Winogradsky and Beijerinick towards Microbiology.

17. Write an essay on the types of microorganisms.

18. Explain the impact of microbes on environment and on human life.

19. Describe various methods of preservation of cultures.

20. Explain the working principle and applications of SEM.

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